10 Qingming Day, 1040 BC

Abstract: I will briefly review the arguments over the date of the Zhou Conquest of Shang, following my discovery in 1979 that the *Zhushu jinian* ("*Bamboo Annals*") appears to provide the key to dating Western Zhou bronze inscriptions. In a paper in the Metropolitan Museum in New York in June of 1980 I argued that the date was early 1045 BC, an argument I enlarged in an article in *HJAS* in 1983. In 1984 I published in *Early China* a tentative argument for 1040. I will now outline eight independent proofs that the date is indeed 1040. The decisive demonstration will show that the victory at Muye occurred on Qingming Day, in the spring of that year.

In my "Response" to critics in the Forum Section of *Early China* 15 (p. 156), I reviewed work on the problem of using the *Bamboo Annals* together with inscriptions and *Shang shu* text to ascertain Western Zhou dates, observing again that my date 1045 for the Zhou conquest of Shang, published in *HJAS* 43, 1983, and D. W. Pankenier's date 1946, in *Early China* 7, are probably both wrong. As my *HJAS* article in 1983 was going to press, I discovered an error in my argument, that led me to publish a note in *Early China* 8 the next year, with an argument for 1040. But that argument too is wrong, and in subsequent work I reverted to 1045, without conviction. It is time to resolve the matter.[1]

Paper presented at the Annual Meeting of the Western Branch of the American Oriental Society, University of Oregon, Eugene, Oregon, October 25–27, 1991.

I am indebted to E. L. Shaughnessy and to D. W. Pankenier for many suggestions over the twelve years of my work on these problems; and not less, for the stimulation of much productive controversy, which may well continue.

1 The essence of my argument in *HJAS* 43 was this: Wen Wang died in 1050 (see below), in what the *Shiji* says was the 7th year of an apparently continuing royal calendar; and the account in the *Shiji* goes on to say that in the 12th month of the 11th year Wu Wang's forces crossed the Yellow River, and defeated the Shang in the following 2nd month. This seemed to be confirmed by the *Bamboo Annals* and the *Lü shi Chunqiu*, both of which say that Wu won his victory in the 12th year, albeit in his own 12th year. The error was my failure to notice that Sima Qian, and other Han scholars such as Liu Xin and Zheng Xuan, systematically misread old dates, taking month designations as names of months in the "Xia" calendar, so that for Qian "12th month" just *meant* "post-winter-solstice moth," no matter when the official year began; thus for him "11th year 12th month" was the second month of the 11th year in the Shang calendar, this is reflected in the "Shijia" chapters, where the victory is said to be at the beginning of the 11th year and the calendar is explicitly said to be Wu's own. So I reasoned that Qian was misreading

https://doi.org/10.1515/9781501505393-010

1. About 40 different dates for the conquest have been proposed over the past 2500 years, and most of them still have their advocates. But the only dates reflecting new work on the *Annals* are 1046, 1045 and 1040. Once 1050 is fixed (by astronomy) for Wen Wang's death, the Conquest must be seen as following within a dozen years. One then finds that lunar phase dates in *Shang shu* chapters are satisfied only by 1045 and 1040.[2]

Pankenier challenges the dates in these texts, but their validity and meaning can be established by a simple argument: The "Kang Gao" opens with several sentences that are misplaced. It has long been supposed that they belong at

---

sources like the *Lü shi Chunqiu*; and since the date had to be either 1045 or 1040 (see below), the only possibility seemed to have Wen dying in the 50th year of his succession calendar beginning in 1101, rather than in the 50th year of his accession calendar beginning in 1099, i.e., his death date was 1052, so that 1040 was Wu's 12th year. This was my concept in my *Early China* correction: "1040 as the Date of the Chou Conquest," *Early China* 8, 1982–83 (actually 1984), pp. 76–78. But for various reasons making Wen die in 1052 is impossible. So perhaps (as I had supposed in 1983) the Conquest was in 1045 after all, though not in a "12th year" that could be Wu's *simpliciter*; this idea I used in publications between 1985 and 1989. The alternative is that the Conquest was dated in Wu's calendar (which every source before Liu Xin that is clear about the matter says), but "12th year" is a mistake. In that case, the most likely date is 1040, i.e. Wu's 10th year, which had become for some reason "12th year" in Warring States source. It was only last year that I found (with evidence) an adequate account of how this change have come about, which will require of space that only a book affords. The present short paper merely presents some of the confirming evidence.

But there was a belief, probably widely held as early as 400 BC, that the Conquest was not in 1040 but in 1045. The issue was (as I see it) whether the Duke of Zhou's regency coincided with the first seven years of Cheng Wang's succession count (2 + 30, = 1037/1035–1006), or preceded Cheng's 30-year official calendar (1035–1006), the latter (1045) view gave greater stature to the Duke, who was probably being advanced to "sagehood" at just this time.

2 That Wen Wang had a calendar beginning in 1099 is proved in several ways, notably by the dating of a lunar eclipse, actually 1065, in the "Xiao Kai" chapter (#23) of *Yi Zhou shu* to Wen's 35th year. Was that calendar his succession calendar or his accession (post-mourning) calendar? The *Annals* account in effect dates a "mandate" given to Wen in the year after a conjunction of planets—the conjunction was actually in 1059—to his 44th year, implying that he reigned 52 years, dying in the 9th year of his mandate; and death in the 9th mandate year is also indicated by *Yi Zhou shu* "Wen Zhuan" (#25). On the other hand, the *Shang shu* "Wu Yi" and the *Shiji* "Zhou Benji" say that Wen reigned 50 years. Confirmation of 52 (=2+50) years, requiring 1050 as death date, is obtained by analyzing the story about an earthquake in the early reign of Wen in Zhou, found in *Lü shi Chunqiu* 6.1. The compiler has copied out a source giving the date, which he takes to be "8th year," whereas it is actually the 9th year. He misinterprets "*sui liu yue*" as "in the sixth month of the (same) year"; it actually means "in a year, in the sixth month" i.e., in the next year; in consequence, when he says Wen reigned 51 years, we must correct this to 52 years. (I demonstrated this in my paper "A tell-tale Mistake in the *Lü shi Chunqiu*," offered to this society annual meeting in Boulder Colorado, October 1989.) For 1045 and 1040, see note 4.

the beginning of the "Luo Gao," since they have to do with things done at the beginning of the last Regency year. But they do not fit there either. On the contrary, they are obviously an alternative to the narrative that prefaces the "Shao Gao." This narrative says that the Duke of Shao (acting for the Duke of Zhou) began work on the site of the new city that was to become Luoyang four days after "new moon day" (*fei*) of the third month, i.e., on the 6th or 7th. The misplaced "Kang Gao" text says that this action occurred on "*zaishengpo*," and in Wang Guowei's system for interpreting these terms (which most accept) this should be the last day of the first quarter, which should be either the 6th or the 7th. So Wang is essentially right, and the texts are valid.[3]

3 Why do I find this "Kang Gao" argument decisive? The text has been out of place at least as long as the "Shao Gao" has been called "Shao Gao," i.e., at least since before the compilation of the *Shiji*, because the present opening of the "Shao Gao" makes it appear—as for 2000 years scholars supposed—that the Duke of Shao rather than the Duke of Zhou is speaking. It is inconceivable that a hypothetical faker of the *Shang shu* lunar phase dates could have made these two opening of the "Shao Gao" coincide in meaning in just the way modern analysis of the system (which has *not* made use of the "Kang Gao" evidence) would cause us to expect, unless he just knew the correct meanings of the terms. But in that case there ceases to be any reason to suppose the dates are faked. (It is primarily the "*shengpo*" (2nd quarter)—"*sipo*" (4th quarter) terms that have been in dispute; I am taking *po* to mean (enlarged =) "gibbous moon"; "*chuji*" (first auspiciousness) and "*jiwang*" (after full moon) are obviously the first and third parts of the month, if a "four quarters" interpretation is adopted.)

That the opening lines of the "Kang Gao" are in fact an alternative opening for the "Shao Gao" requires argument: The objection that the former says the Duke of Zhou began the work on the foundations of the new city, whereas the latter says the Duke of Shao did it, is answered by the account the Duke of Zhou gives the king at the beginning of the "Luo Gao": he did it, he says, "*yin bao*," which means "causing the *Taibao* (= the Duke of Shao) to act for me" (see the use of the word "*yin*" 胤 in *Shang shu* chapter 18, "Gao Zong Rong ri"), and he adds that *we* (*wo*, not *yu*) took the oracles, i.e., he does not represent that he did this in person. The objection that the opening has two valid replies commonly made: a change of subject before *yue* "said" is quite possible; and in the address we find "Dan *yue*," which ought to mean "I, Dan, say...," for in the only other cases in the *Shang shu*—there are six of them—where "Dan" is used as a personal name it is always the Duke of Zhou who is referred to and speaking. (The standard account is that the Duke of Shao is quoting the Duke of Zhou at this point, referring to him by his personal name—even though he has already addressed him as *Gong*.) The decisive proof is the way the "Kang Gao" account reads: The Yin multitude is brought to the Duke of Zhou, and he "encouraged" (*qin*) them all, then using the occasion to give a major address on matters of government. This is what he does, at the end of it picking up again the word *qin*: "We would not presume to encourage [you]" (*wo fei gan qin*), i.e., to suppose that you need encouragement—thus making a graceful apology for having turned what was billed as a pep-talk into a speech of a different kind.

Examination of *Shang shu* dates in the "Shao Gao" and the "Luo Gao" show that the last year of the Regency must be either 1036 or 1031, and the fragments of the "Wu Cheng" quoted in the *Han shu*, "Lü-li zhi" (21B) are then satisfied by either 1045 or 1040. But the earlier dates, 1045 and 1036, require a calendar beginning each year with the pre-solstice month, while the later dates 1040 and 1031 accept a calendar beginning with the winter solstice month; and the latter type of calendar is what the *Shiji* says the Zhou calendar was. So, *prima facie*, the Conquest year should be 1040.[4]

4 This argument by itself is weak as an argument for 1040 over 1045, because I think it can easily be shown, e.g. by inscription dates, that the classical Zhou calendar was often enough not used in Western Zhou; in fact, I will argue below that most lunar month dates for Conquest-year events must be interpreted as in the "Xia" calendar. But once one sees that the lunar phase constraint must be respected, it eliminates all candidate Conquest dates other than 1040 and 1045. These are the only two years that work, even if Tung Tso-pin's tables of first days of months (*Chronological Tables of Chinese History*, Hong Kong University Press, 1960), which I use, are here or there a day off, and no matter whether the "first month" is taken to be the pre-winter-solstice month, or any one of the next three months, with intercalary months posited wherever they might possibly occur.

A table of possibilities demonstrates this. If the *jiazi* victory was in the "2nd month," and five days counting from *jisipo* taken as the first day of the fourth quarter (see note 6), then *jiazi* cannot be later than the 30th, making the first day of the month *yiwei* (32) at the earliest. Let us suppose that *jisipo* then the first of the month would be day *wuxu* (35). Since Dong is sometimes a day off the actual syzygy in China, I will check as possible first days of the Conquest month days *jiawu* (31) through *jihai* (36); and pretending that I do not know the month, or when intercalations were done, I check every month from the pre-winter-solstice month through the next six months (0, 1, 2, 3, 4, 5, 6,). The year cannot be Wu's succession year 1049, but let us check the next ten years (I use numbers for *ganzhi*):

Month / Year	0	1	2	3	4	5	6
1048	51	21	50	20	49	19	49
1047	46	15	45	14	44	14	43
1046	10	39	9	38	8	37	7
1045*	*4	34	3	33	2	32	1*
1044	59	28	58	27	57	26	56
1043	22	52	21	51	21	50	20
1042	17	46	16	45	15	44	14
1041	11	41	11	40	10	39	9
1040*	*35	5	34	4	33	3	32*
1039	30	59	29	58	28	57	27

It will at once be seen that the possible first days (underlined here) occur only in years 1045 and 1040.

2. But this conclusion contradicts a text in the *Guoyu* (which was the basis of Pankenier's case), stating that Jupiter was in Jupiter station Quail Fire at the beginning of the Conquest campaign. If this text is to be rejected, it must first be accounted for. I have published an argument ("*Guoyu* 'Wu Wang fa Yin' tian xiang bian wei," *Guwenzi Yanjiu* 12 (1985), pp. 445–465) that it was deduced in computations in the –1st century, perhaps about 50 BC, and then inserted in the *Guoyu* (for while Liu Xin exploits the text, Sima Qian a century earlier knew nothing of it). But this analysis assumed that the Muye victory was in January of 1045, and that Wu's campaign therefore started before the winter solstice month, as the *Guoyu* requires. This is probably not true, and I here offer a better explanation:[5]

The *Guoyu* text represents its information as given in a conversation occurring around 522 BC. If the Conquest was actually in 1040, and we accept the month and day dates in the "Zhou Benji" in the *Shiji* but interpret those dates as in the "Xia" calendar (beginning the year in the pre-spring-equinox month), and assume that those month and day dates, and the year date 1040, were "received" information ca. 525–475 BC, then a calculator at that time would have deduced (a) that Jupiter must have been in Quail Fire at the beginning of the Conquest campaign, but also (b) that the month dates must be interpreted as in the Zhou calendar rather than in the Xia calendar, which would make the campaign begin before the solstice, as in the present *Guoyu* text. So it would seem that the best explanation of the "Quail Fire" tradition calls for dating the Conquest to 1040.[6]

---

5 The *Guoyu* astrological text is found in section 7 of part 3 of the "Zhou Yu." It requires a pre-pre-solstice-month starting date for the campaign because it locates the sun in "*Ximu zhi jin*," "the ford of Split wood," i.e., the crossing of the Milky Way in the "Basket"—"Southern Dipper" area, at a point about 225 degrees west of the solstice point in the zodiac being used (probably a zodiac correct for about 1000 BC), and the position given for the moon shows that we must suppose the month to end just a few days later. While I now think that my account in *Guwenzi Yanjiu* is unlikely to be the way these astrological details were derived, it may well have been the way they were understood by a person adding them to the *Guoyu* in the –1st century.

6 In this reasoning I am accepting the following month day dates, and am assuming that a calculator in the early –5th century is also accepting them: start of the campaign, day *guishi* (30), =the day after *pangsipo* (as in Liu Xin's quotation from the "Wu Cheng" in *Han shu* 21B (p.60a of 76 in my text), where the month is given its Zhou calendar name "1st month"); Zhou forces crosses the Yellow River, 12th month, day *wuwu* (55) (as in *Shiji*, " Zhou Benji," p. 8b of 40); victory at Muye, 2nd month, day *jiazi* (1) = 5 days counting from *jisipo* (as in *Shiji*, "Zhou Benji" and in Liu Xin's quotation from the "Wu Cheng"). I count as a mistake Sima Qian's assumption that "12th month" was an earlier date *in the same year* as "2nd month" (for him, "11th year), but I think Qian was right (for reasons apparent in sections 3 and 8 of this paper) in

3. There is another tradition about Jupiter, buried in a commentary to the "Ru Xiao" chapter of *Xunzi*, which says that at the beginning of the Zhou campaign Jupiter was in "the north." "Quail Fire" is in the south on an astrologer's chart; due north would imply a location of the planet in lunar lodge Xu, in the vicinity of Aquarius. If the dates in the "Zhou Benji" are used, but taken as in the so-called Xia calendar, then the campaign must have begun in mid-January, 1040, and at that time Jupiter was in Xu. This alternative tradition thus further confirms 1040 as the Conquest date.[7]

---

assuming that these dates (obviously copied from some source) are Xia calendar dates, e.g., that "12th month" is the month *after* the winter solstice month.

A calculator in the early –5th century would have concluded that the Conquest campaign, if beginning in late 1041, must have begun at a time when Jupiter was in Quail Fire, for the following reason: He would have believed (mistakenly) that the Jupiter cycle is exactly 12 year. He would have observed that (e.g.) 489 was a "Quail Fire" year for Jupiter; and he would then see that 489 is just 12 x 46 years after 1041.

And he would have concluded that received month dates for Conquest-year events must be read in the Zhou calendar rather than in the Xia calendar, for a more complex reason: The classical system of counting years by 19's, with a *ganzhi* day-cycle designation for the first day of each 19-year *zhang*, gives days true to the actual lunar and solar calendars between 579 and 389 BC. This suggests that the system was first used in the early –5th century (the midpoint being 484). A calculator using this system at that time to determine *ganzhi* designations of first days of lunar months in 1041–1040 would get them two cycle numbers too early, since the system has a built-in error. This would force him to conclude that a Xia-calendar interpretation of known dates of events in the Conquest year could not be right, because the error would tell him that the date *jiazi* (1) for the battle of Muye would not be in the last quarter of the Xia 2nd month, but would be the first day of the Xia 3rd month. Therefore he would be obliged to date the battle back two months, i.e., interpret "2nd month" in the Zhou calendar. This would make *jiazi* fall on the last day of the 2nd month, which would seem acceptable.

The calculator could now do either of two things. He could interpret all the month dates in the Zhou calendar, i.e., move them all back two months, making the campaign begin in the last month of autumn, as does the *Guoyu* astronomical data; or he could keep the starting month fixed, rewriting it in the Zhou calendar as "1st month," thus making the campaign last only one month, from launching to victory. This appears to be what was done in an adjustment of the *Shang shu* text.

7 I am indebted to Prof. D. W. Pankenier for calling my attention to the "north" tradition. (See his Stanford doctoral dissertation, "Early Chinese Astronomy and Cosmology: the "Mandate of Heaven" as Epiphany" (August, 1983) p. 241. Pankenier himself dismisses this tradition (pp. 243–244) without claiming to have disproved it.) I tentatively take 17 January 1040 as the kick-off date, because I see no way that the alternative, the last month of autumn in the preceding year, could have led to a reinterpretation that made the date the "1st month." (The last month of autumn would still have Jupiter "in the north" astrologically speaking, although not due north.)

4. The *Guoyu* says that the state of Jin began in a year when Jupiter was in station Great Fire (vicinity of Antares). This is consistent with the *Bamboo Annals* which dates the founding enfeoffment of Cheng Wang's younger brother Yu in Tang (later Jin) to 1035, and dates a conjunction of the five planets, said there to be in lunar lodge Fang—in the middle of Great Fire—to 1071, which would be three 12-year Jupiter-cycles earlier. The *Bamboo Annals*' date for the enfeoffment is three year after the end of the Duke of Zhou's regency as dated in the *Annals*. Now, the actual date when Jupiter was in Great Fire was 1031 (also late 1032). Therefore if the relative event-sequence in the *Annals* is approximately right, and if this Jupiter tradition is true, then the Regency must have ended well before 1031, and this would require that the Conquest be actually in 1045. But if the tradition about Jupiter is accepted, and there is evidence that the enfeoffment occurred before the end of the Regency, then the conquest must actually have been in 1040.[8]

And there is such evidence: The *Shiji* chapters "Zhou Benji," "Lu Shijia," and "Jin Shijia," all give details of the sequence of events leading to the enfeoffment of Tang-shu Yu that date it before the end of the Regency. For this kind of material the *Shiji* is not always reliable; but there is confirmation in the *Zuo zhuan* (Xi Gong 15.14), where near the end of this long section we read, "Moreover I have heard that when Tang-shu was enfeoffed, Jizi said, "His posterity is sure to be great.'" Jizi, a shy Shang prince and reluctant vassal of Zhou, almost never came to court; but he almost certainly would have been part of a convocation of the regional lords recorded in the *Annals* in the summer or autumn of the last regency year. This, then, is likely to have been the time when Tang-shu's enfeoffment was formalized; and if it was, then the Conquest must have been in 1040.[9]

Note that the "Wu Cheng" text as quoted by Liu Xin has the victory dated "*yue ruo lai er yue ... jiazi*," which has to mean "on day *jiazi* (1), ... in the (coming 2nd month =) 2nd month of the next year," showing that a source text must have had "*shi-yi yue*," "11th month," instead of "*yi yue*," "1st month," for the date of Wu's departure from his capital. Similarly, *Yi Zhou shu* "Shi Fu," "*lai dingmao*," means "on day *dingmao* (4), in the next month." (This "*lai*" idiom, now recoverable from oracle inscriptions, has been misunderstood for over 2000 years.) See note 20.

8 See *Guoyu*, "Jin Yu" 4 (about one-fifth of the way into the long first section) for the "Great Fire" location of Jupiter at Jin's beginning. In *Annals* terms the event was in Cheng 10, and the conjunction was in Di Xin 32.

9 According to the *Annals*, in Cheng 8 (the year after the end of the Regency), the rebelling state of Tang (which became Jin) was reduced, later (Cheng 10) being given as fief to Yu, who becomes known as "Tang-shu Yu." In Cheng 11 Tang-shu finds a grain-stalk prodigy and presents it to the king. In the *Shang shu* prefaces the grain-stalk affair occurs during the Regency, and so also in the *Shiji* "Zhou Benji" and "Lu Shijia." Further, in *Shiji* "Jin Shijia," it is the Duke

5. The *Shiji* appears to represent the Duke of Zhou's son Bo Qin as already lord of Lu early in the Regency, before the outbreak of the revolt of Lu Fu and the royal uncles. Therefore, determination of the date of the beginning of Bo Qin's reign will strongly confirm either 1045 or 1040 as Conquest date.[10]

The probable date can be got as follows: Liu Xin (*Han shu* 21 B) says that Bo Qin reigned 46 years. The *Shiji*, "Lu Shijia," gives reign lengths of Lu dukes that imply that Bo Qin died in 999. This indicates 1044 as his first year; and this is possible only if the Conquest was in 1045, and his father the Duke of Zhou gave the fief of Lu to his son almost at once, after Wu Wang granted it to the Duke. But is 999 the year of Bo Qin's death?[11]

Almost certainly not. In the *Bamboo Annals*, too, one finds data on the chronology of Lu, in the form of entries recording the deaths of most of the Lu dukes. The data is incomplete, and distorted; but carefully analyzed it shows that the tradition reflected in the *Annals* had Bo Qin dying in 990. This would imply 1035 as his first year, which was the first year also of Cheng Wang's 30-year accession calendar (whichever date we take for the Conquest). And there is a tradition (Liu Xin has it) that Bo Qin's and Cheng's reigns began at the same time. Further analysis reveals why the *Shiji* and the *Annals* differ: in the *Shiji*, the seventh duke, Xian, has a reign of 32 years, which would have to be 887–856. The date of Xian's death has dropped out of the *Annals*, but one can deduce that his reign must have been 23 years (rather than 32), 878–856. The shorter reign is almost certainly correct, because Xian was the brother of his predecessor Duke Li, whose reign was 37 years; and their father Duke Wei reigned 50 years.[12]

---

of Zhou who suppressed the rebelling Tang, during the Regency; and its account of the circumstances of the enfeoffment makes it clear that Cheng was still a minor.

10 The "Lu Shijia" says that Wu Wang granted Lu to the Duke of Zhou right after the Conquest, and that the duke gave it to his son Bo Qin soon after Cheng Wang's succession. Only then does the account take up the outbreak of the eastern revolt of Lu Fu and the royal uncles.

11 Liu Xin's account in *Han shu* 21B (p. 63a of 76 in my text) is often read as saying that he merely "inferred" the figure "46." I read it instead as taking the datum "46 years" as a premise, leading to the "inference" that Bo Qin "served Kang Wang." Chavannes, a century ago (*Memoires historiques* 1, p.cxciii), noticed that the *Shiji*'s implied death date 999 for Bo Qin is exactly 46 years (inclusive) after the *Bamboo Annals*' first year for Cheng Wang, the date converting to 1044. This suggests that 46 years was well known to be the length of Bo Qin's reign in Lu.

12 Liu Xin (p. 62a) says that Bo Qin's 46-year reign and Cheng Wang's 30-year reign began in the same year, and I agree. Liu, however, makes the 7-year Regency precede he 30 years, as does the *Annals*, though the latter simply gives Cheng 37 years, including the Regency. I am arguing that the Regency was the first 7 years of 32 (= 2 + 30) years for Cheng, i.e., that it began

The implication then is that Bo Qin's rule formally began in 1035, and that the Regency began not much earlier; and this requires that the Conquest was in 1040.[13]

6. How long did King Wu live? The *Li ji*, "Wen Wang shizi," says he had 93 years (and that his father Wen had 97 years). We scoff; but we may take seriously the entry at the end of Wu Wang's chronicle in the *Annals*, that gives Wu Wang 54 years.[14]

When was Wu born? An often quoted passage from some unknown source reads (variously), "*Wen wang (nian) shiwu (er) sheng Wu Wang*," always interpreted "Wen Wang produced Wu Wang at age fifteen." But this is improbable (Wu actually had an elder brother, who died young; and there is an even chance that Wen's first offspring were females). I suggest that the original wording probably was that Wu was born "in year fifteen" (*shiwu nian*) of the current reign, perhaps Wen's own, but perhaps instead the reign of Di Yi, the (probable) current Shang king.[15]

Di Yi's dates are known: I have demonstrated (in my *HJAS* article, p. 558, and in an earlier AOS conference paper in 1983) that the Di Yi reign began in 1105. Di Yi 15 thus was 1091. 1091 would be the first year of a 54-year life that ended in 1038. Wu died two years after the Conquest, and this again puts the Conquest in 1040.[16]

---

in Cheng's succession year, and that "30 years" is simply Cheng's reign counting from his accession year (which I take to be 1035).

13 It is possible that Bo Qin's tenure in Lu was actually 2 + 46 years, i.e., that he was given his father's fief immediately See my argument in *HJAS* 43 pp. 530–531.

14 An engaging possibility is that Wen lived 79 years rather than 97. This would put his birth in 1128. This is one year before the date of the death of Wen's grandfather Dan-fu, if his death-date given in the *Annals* chronicle for Wu Yi of Shang is reduced by 12 years, as must be done for pre-Conquest dates for Zhou in the *Annals*. Tradition says that Dan-fu noticed Wen (Prince Chang) as a baby just before he died, and that it was for this reason that Ji Li (Wen's father) became the successor.

15 Liu Xin uses the line in his analysis of Zhou chronology in *Han shu* 21B (p. 61a of 76, in the edition I happened to use). Kong Yingda (Tang Dynasty) uses it repeatedly in his sub-commentary (*shu*) to the Classics, and when he gives a source it is usually Zheng Xuan's (lost) comments at the opening of the "Odes of Bi" and to the "Decade of Wen Wang" in the *Shijing*).

16 For Wu's death two years after the Conquest, see, e.g., *Shiji*, "Feng Shan Shu" (p. 7a of 28 in my text). Shaughnessy shows that "two years" is an exclusive rather than inclusive count. (See E. L. Shaughnessy, "On the Authenticity of the *Bamboo Annals*," *HJAS* 46 (1986), pp. 149–180.)

7. Chapter 45 in the *Yi Zhou shu* is titled "Wu jing," i.e., "Wu (Wang) Warned." It begins: "It was the 12th cult-year, 4th month. The King reported a dream. On day *bingchen* (53)" the dream was divined; and (the text continues) "(the King) then issued an order directing Dan, Duke of Zhou, to appoint the successor, and to give Prince Song the text, and (a copy of) the "Bao Dian" ("Treasured Document")."[17]

We must assume that the dream signifies Wu's impending death in (probably) the same year. If Wen Wang died in 1050, the year of Wu's death here indicated is again 1038. Further, the day-date fits, if we assume that Zhou calendar was two days behind precession, for that would make the winter solstice appear to fall on 1 January 1038 (rather than on 30 December, its actual date). 1 January happened that year to be the first day of a lunar month, and if that month counted as the Zhou 1st month then the "4th" month would begin with day *yimao* (52). When a date is incomplete, it is likely that the events recorded start with the first of the month. If the dream occurred that night, it was being reported by the king the next day, i.e., *bingchen*, as stated.[18]

The "Bao Dian" is chapter 29 of the *Yi Zhou shu*. It consists of a homily by the King, and it opens with a more complete date: "It was the King's 3rd cult-year, 2nd month, day *bingchen* (53), first day of the month." In a calendar in which the 4th month begins with day *yimao* (52), the 2nd month must begin with *bingchen* (53), so it appears that the same year is meant—now called "the King's 3rd cult-year"—which it must be, if Wu Wang died two years after the Conquest, and the Conquest was in 1040. 1038 is the only year that could be both the year of Wu's death in his own 12th year, and also the date of document issued by him in his "royal" 3rd year.[19]

---

17 "The text"; I assume, of the king's order. This chapter is a fragment, not always clear.

18 An example of a first-of month date not so indicated is the appointment of Mao Qian in the 9th year of Gong Wang in the *Annals*, there said to be "first month, *dinghai*." The year was 909, whose (Zhou calendar) first month began with day *dinghai*. (In *HJAS* 43, pp. 505, 566, I incorrectly dated the dream incident to the month of the victory celebration in the Conquest year.)

19 The two chapters (#29, #45) apparently have different sources: The "Bao dian" (#29) uses the quasi-copula particle *wei* as in the *Shijing*: the "Wu Jing" fragment appears older, and use *wei* as in the *Shang shu*. For this and other reasons, I doubt that the homiletic text is actually Wu's; but this need not invalidate the date. The "Xiao Kai" (#23) is a homily described as Wen's; it surely isn't, but the date is validated by astronomy. What is happening, I suggest, is that some old chronicle contained dates and events, and later invention supplied the texts of addresses or conversations referred to or implied in the chronicle. But it must be admitted that many dates in the *Yi zhou shu* are the result of later invalid deduction; e.g., the year after the Conquest was not (in my judgment) the "13th year" ("Da Kuang," #38) but the 11th.

8. In the foregoing step I needed to assume that the Zhou calendar was two days behind precession. The same assumption is indicated if 1031 was the last Regency year, for in the "Luo Gao" the last day in the "12th month" of that year, the date of a great rite by Cheng Wang, is said to be day *wuchen* (5). In 1031–1030, just as in 1039–1038, the Julian calendar and the lunar calendar happen to coincide: *wuchen* is the last day of a lunar month, and is also 31 December. But the solstice that year was 30 December, so in the Zhou calendar the month ought to have been the first month of the year corresponding to 1030. Thus (if this test uses a Zhou calendar) we have to assume again that the current Zhou calendar was at least two days behind precession (of which the Chinese at this time were ignorant). My guess is that Cheng thought he was sacrificing on the eve of the winter solstice.[20]

My chief reason for returning to the date 1045 for the Conquest was my conviction, based on fair evidence, that in late Shang and early Zhou first days of the 24 solar weather periods were favored as lucky days and chosen for important state acts, such as the launching of a campaign, the fighting of a battle, or a victory celebration. 1045 located these events in the Conquest year on such days; 1040 did not. But if the Zhou calendar was two days off in dating the win-

20 But it is, I think, the Xia calendar and not the Zhou calendar that the Zhou court was still using at this time, and month numbers in the "Shao Gao" (and "*shi-yi yue*" in the "Wu Cheng") have been rewritten so as to translate these dates from the Xia calendar to the Zhou calendar. The argument: the word *lai* in a date signifies that the following named month (or day) falls in the following larger time unit, year (or month, or, in Shang oracle inscriptions, *xun*). Therefore the sequence in (e.g.) the "Shao Gao," "*er yue… yue ruo lai san yue…*" must have originally been "*shi-er yue … yue ruo lai zheng yue …*" if this is right, it is another powerful argument for 1040 as Conquest date, because 1031 will then satisfy the "Shao Gao" dates, but 1036 will not (See note 7.)

In any case, the calendar would posit a solstice day that would be one day late for every 70 years that the actual occurrence of the solstice had not been checked by observation and corrected accordingly. Note the reference to the sacrifice in the "Luo Gao": *zheng ji sui*: *zheng* is defined as a winter sacrifice to royal ancestors; *ji sui* literally is "sacrifice [to or by] *sui*," where *sui* can be either the name of some kind of cutting sacrifice, or (its normal meaning) "year." If it is the latter here, the meaning seems to be "performed the winter sacrifice, thus ritually marking the turn of the year." If the year was 1036 rather than 1031, not only is it impossible for the rite to be on the eve of mid-winter; it isn't even in winter, but at the end of autumn, contrary to the meaning of the word *zheng*.

(The *Shang shu* text of the "Luo Gao" does not say explicitly That day *wuchen* is the last day of the month. The only possible *wuchen* days in Dong's tables are last-of-month days, and the "*zhuan*" commentary ascribed to Kong Anguo does make it explicit, calling *wuchen*-day "*hui*.")

ter solstice, to which the 24 periods must be keyed, the situation is reversed, and it is 1040, not 1045, that satisfies this requirement.[21]

The Conquest calendar in 1040 then is as follows, if I assume that at least up until the Conquest the Zhou used the popular "Xia" calendar beginning the year with the pre-equinox month, and only afterwards (possibly long afterwards) did they promulgate what is classically described as the Zhou calendar, beginning the year with the solstice month. (Dates are taken from Liu Xin's citations from the "Wu Cheng" in *Han shu* 21 B, and from *Shiji*, "Zhou Benji.")

Zhou 1/ Xia 11, day *guisi* (30) =17 January,
Campaign begins, first day of Xiaohan (Lesser cold)
Zhou 2/ Xia 12, day *wuwu* (55) =11 February
Zhou armies cross the Yellow River
Zhou 4/ Xia 2, day *jiazi* (1) =18 April
Victory at Muye, first day of Qingming (Clear Brightness)
Zhou 6/ day *gengxu* (47) =3 June
Celebration in Zhou on full moon, first day of Xiao-man (Grain Ripening)

This analysis is confirmed by the last line of the "Da Ming" ode in the "Da Ya" part of the *Shijing* (Ode 236). That ode narrates Heaven's favor to Zhou through Wang Ji, Wen and Wu, down to Wu's victory. The last line reads, "*si fa da shang, hui zhao qing ming*" 肆伐大商，會朝清明. The meaning has escaped all translators and commentators: the line says, "He (Wu) let loose [his forces] and attacked great Shang; this occurred in the morning, Qingming [Day]."[22]

21 Other examples of *qi*-days as lucky days: (1) the day of "attacking the site (*gong wei*) in the "Shao Gao" which would be the first day of Lichun ("Beginning of Spring"), if the year is 1031 and again we suppose the calendar is two days behind precession; the date would be 16 February. (2) The date of the victory celebration in the *Xiao Yu ding* inscription, 25th year, 8th month, 3rd quarter, *jiashen* (21), presumably the first day of the 3rd quarter, since a *liao* sacrifice is performed. Again I assume that the Xia calendar is in use, but by now correction has been made for precession. It turns out that the date is the 15th of October, 979 (25th year on Kang Wang's accession calendar counting from 1003), 16th of the lunar month, and the first day of Hanlu ("Cold Dew").

22 Karlgren's translation, for example, is "He killed and smote the great (people of) Shang; the morning of the encounter was clear and bright." (Bernhard Karlgren, *The Book of Odes*, Stockholm, 1974, p. 1888.) Any such interpretation gives a very strange—indeed, quite pointless—final line for the poem.

Some will object that in taking "Qingming" as the name of the solar *qi*-period (here, for its first day), I am assuming without evidence that the system of twenty-four solar periods, and their names, existed already in eleventh century BC. I have at least two replies: (1) Evidence does not have to take the form of testimony or the occurrence of terms in a text. See my "The

Origin of the Chinese Lunar Lodge System" (in A. F. Aveni, editor, *World Archaeoastronomy*, Cambridge University Press, 1989), where by analyzing the earliest surviving evidence of such systems, I show that partitions of the zodiac into equal 28ths and equal 24ths must have been known in China as early as the third millennium BC; and a division into 24ths implies a system of twenty-four solar periods, however named. (2) It is true (as far as I know) that there are no other occurrences of the name of a solar period in the *Shijing* or in any text of similar antiquity. But the first day (or so) of Qingming has special importance, because it was the major religious festival in the ancestor cult; "Qingming," therefore, is likely to be one of the oldest of the names.

Another quite proper request must be addressed, however. My identification of *qi*-days depends on more assumptions than the one stated, that the winter solstice day was two days late in the Zhou calendar. Ideally a *qi*-period was 15 days—see *Huainanzi* "Tian Wen Xun" paragraph 12—but a year is five (sometimes six) days more than 24 × 15. How does one decide where to locate the (normally) five supernumerary days that create five 16-day periods?

I have assumed that the five days are the solstices and equinoxes, and the first day of summer. The winter solstice day is indicated by the fact that in the oldest form of the system of 28 lunar lodges the lodge Xu is 14 *du* wide, whereas other residues of an ancient equal-space system, Xing, Zhang and Yi, are 13 *du* (365 = (28 × 13) + 1); and it was in Xu that the winter solstice was located. My choice is reconfirmed by reading of "Tian Wen" 12, which also guides me to select the other days: it says that 46 days pass from an equinox or solstice to the beginning of the next season, and also that 46 days pass from the beginning of summer to the summer solstice.

I have computed the date of the winter solstice in China in late 1041 BC: it occurred at about 19 hours on 30 December, i.e., Julian Day 134 1562; so I assume that the Zhou court thought it was on 1 January, JD 134 1564. This gives the following *qi*-calendar for the first half of 1040 BC:

***Qi*-period**	**Days**	**1st Day**	***Ganzhi***	**JD 134**	
Dongzhi	16	1 Jan	(14)	1564	
Xiaohan	15	17 Jan	(30)	1580	Campaign begins
Dahan	15	1 Feb	(45)	1595	
Lichun	15	16 Feb	(60)	1610	
Yushui	15	3 Mar	(15)	1625	
Jingzhi	15	18 Mar	(30)	1640	
Chunfen	16	2 Apr	(45)	1655	
Qingming	15	18 Apr	(1)	1671	Victory at Muye
Guyu	15	3 May	(16)	1686	
Lixia	16	18 May	(31)	1701	
Xiaoman	15	3 June	(47)	1717	Victory rites
Mangzhong	15	18 June	(2)	1732	

The date of the Victory rites happens also to be the first day of the 3rd quarter of the month, *jiwang*, and a *liao* burning sacrifice is made. The same thing is done in the victory celebration recorded in the *Xiao Yu ding* inscription, also on a day which is both a *qi*-day and a *jiwang*-day.

The entire poem celebrates the glorious virtue of the ancestor-kings and their consorts, to whose merit the great victory on Qingming Day, in addition to being a mark on the calendar, is the most important annual festival in the ancestor cult. Thus we can now recognize the "Da Ming" ode as a Qingming Day hymn.

Note (October 1991): In this conference paper, I have set down only those arguments that allow a reasonably brief statement. They are taken from a book-length manuscript that has been my occupation for the past twelve months, on the problem of the exact date of the Zhou Conquest, subjoining a selection of unpublished papers of mine over the past dozen years that are directly or indirectly relevant. The largest part of this task I have had here to omit entirely: working out a satisfactory explanation of the various theories found in ancient literature, most notably the chronology found in the so-called "modern text" *Bamboo Annals* (actually a Warring States text), and the very different chronologies of Han scholars such as Liu Xin and Zheng Xuan. Like much in the following paper, his explanation requires me to reject or correct important parts of my article "The Dates of Western Chou," *Harvard Journal of Asiatic Studies* 43 (1983), pp. 481–580.